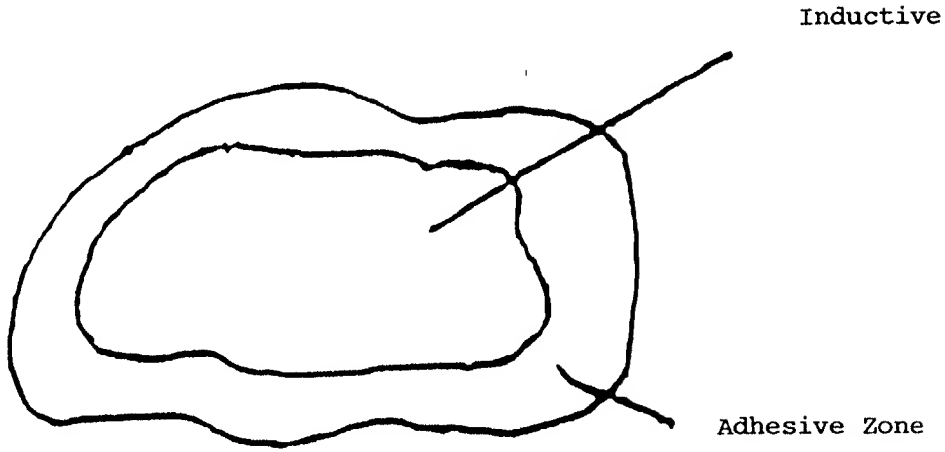
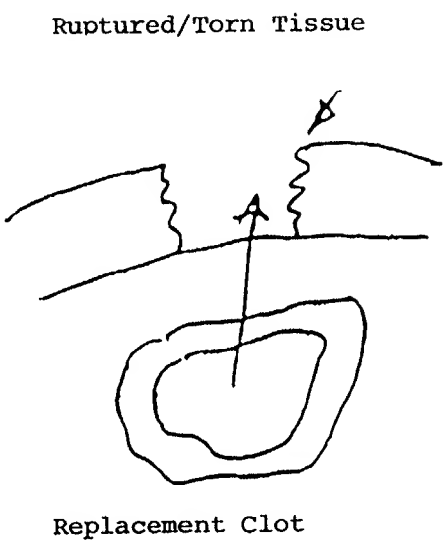


FIG. 1



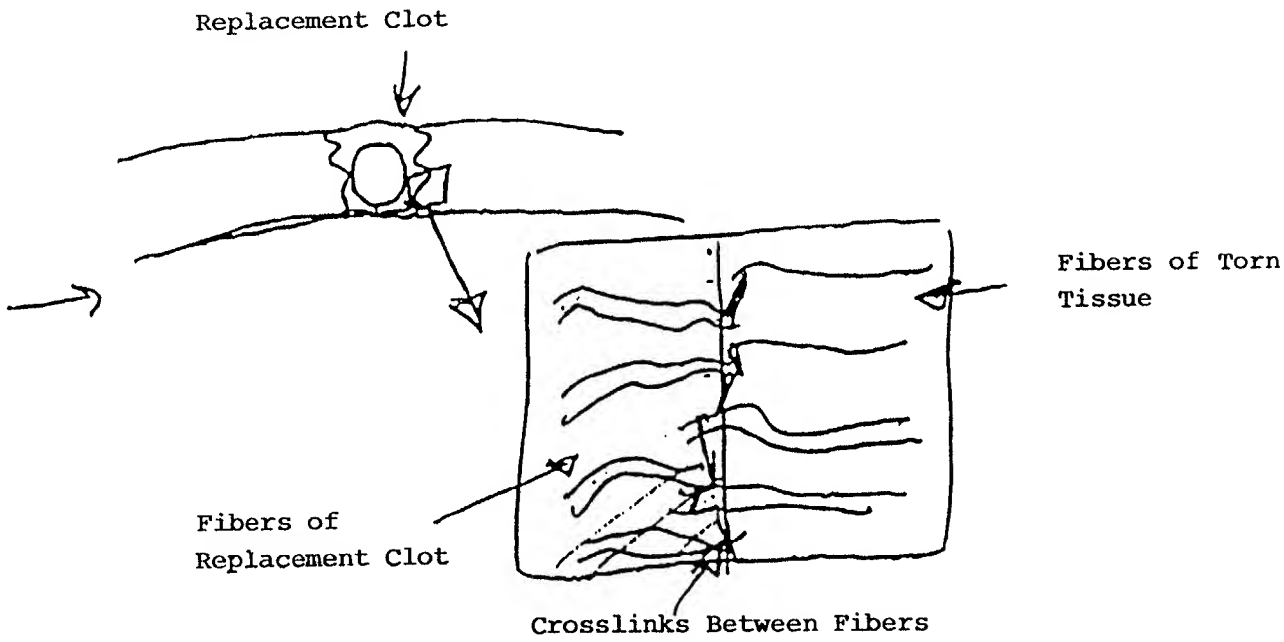


FIG. 2

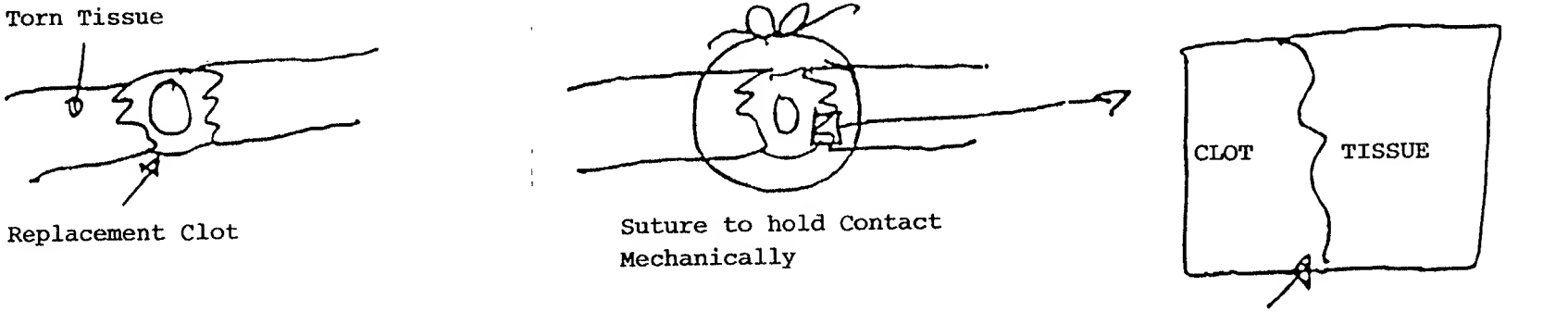


FIG. 3

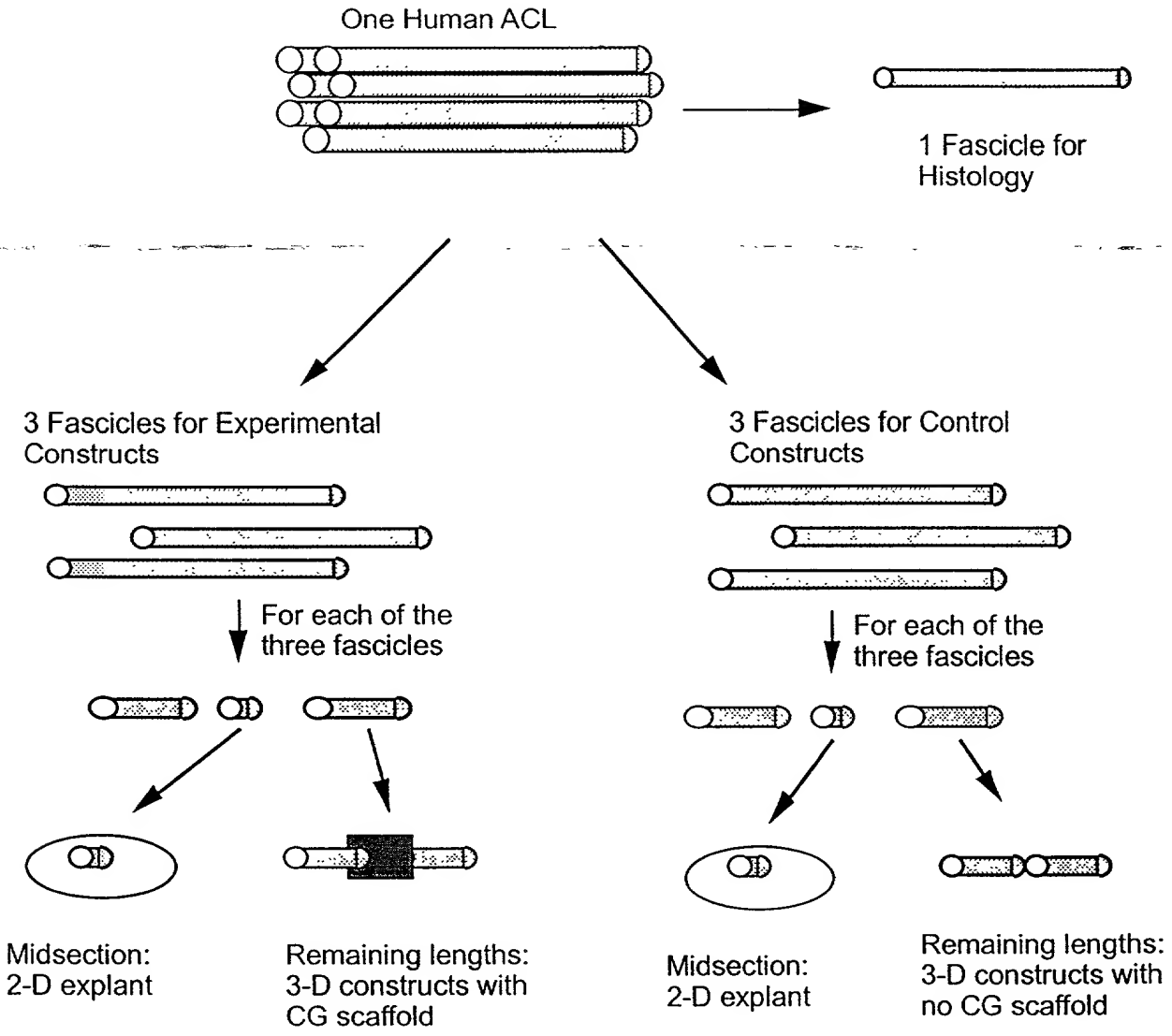
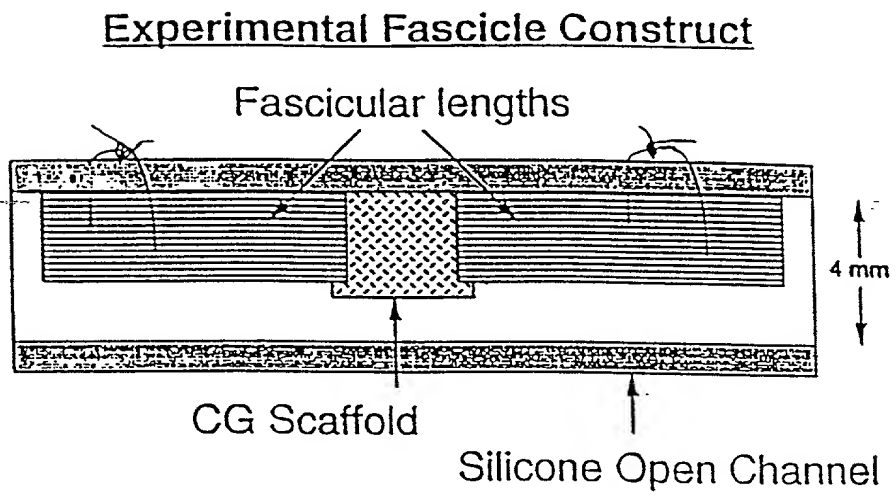

One Human ACL
1 Fascicle for Histology
3 Fascicles for Experimental Constructs
For each of the three fascicles
Midsection: 2-D explant
Remaining lengths: 3-D constructs with CG scaffold
3 Fascicles for Control Constructs
For each of the three fascicles
Midsection: 2-D explant
Remaining lengths: 3-D constructs with no CG scaffold

FIG. 4

Figure 5: Schematic of experimental and control three-dimensional constructs



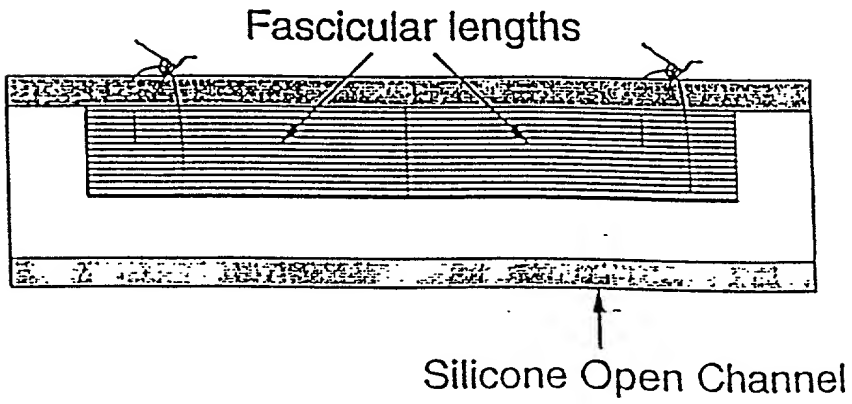


Figure 6: Effective Radius of Outgrowth as a Function of Time for Human ACL Explants

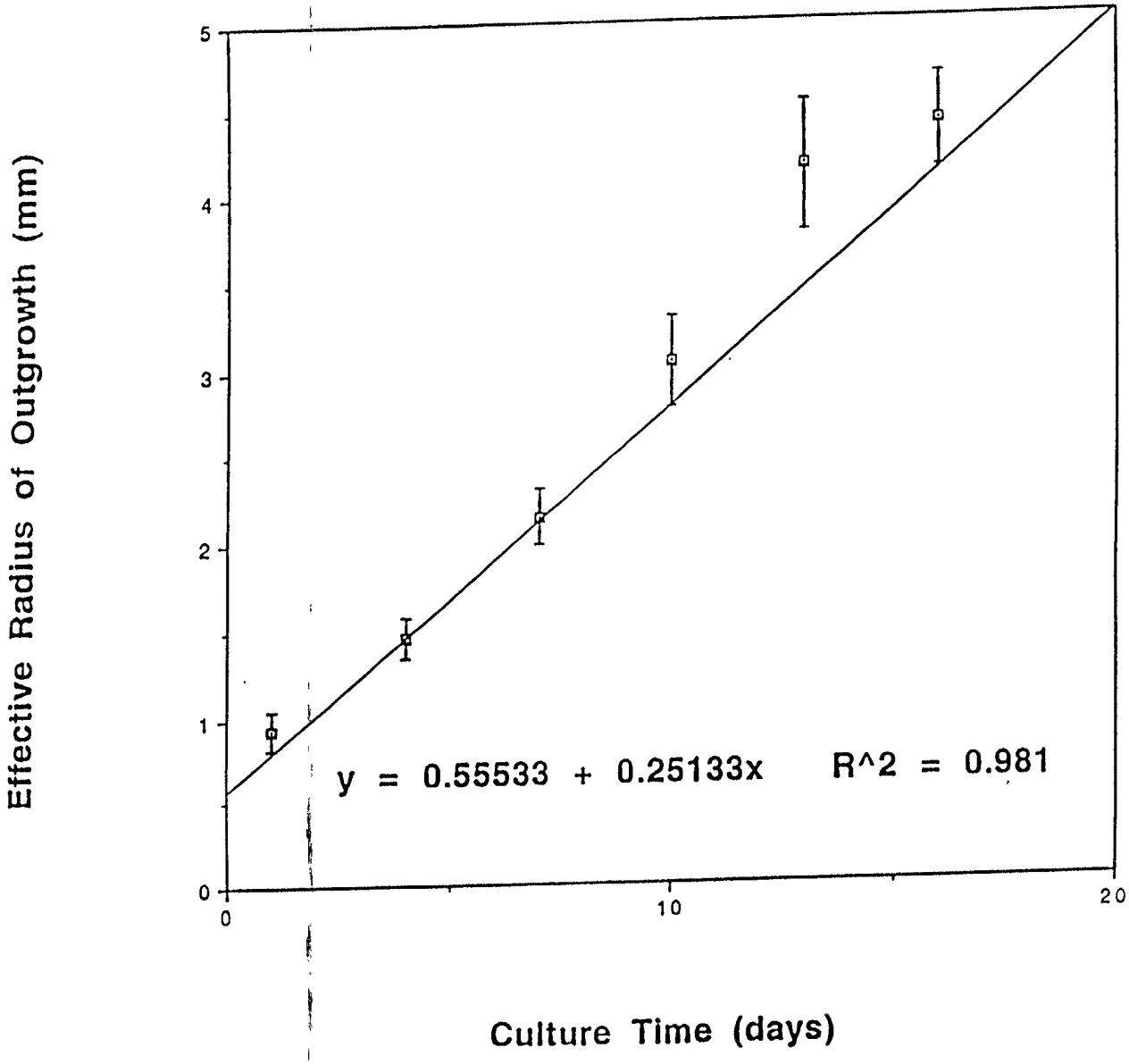


Figure 7: Changes in Cell Number Density in the Fascicle-CG Scaffold Construct as a Function of Time in Culture

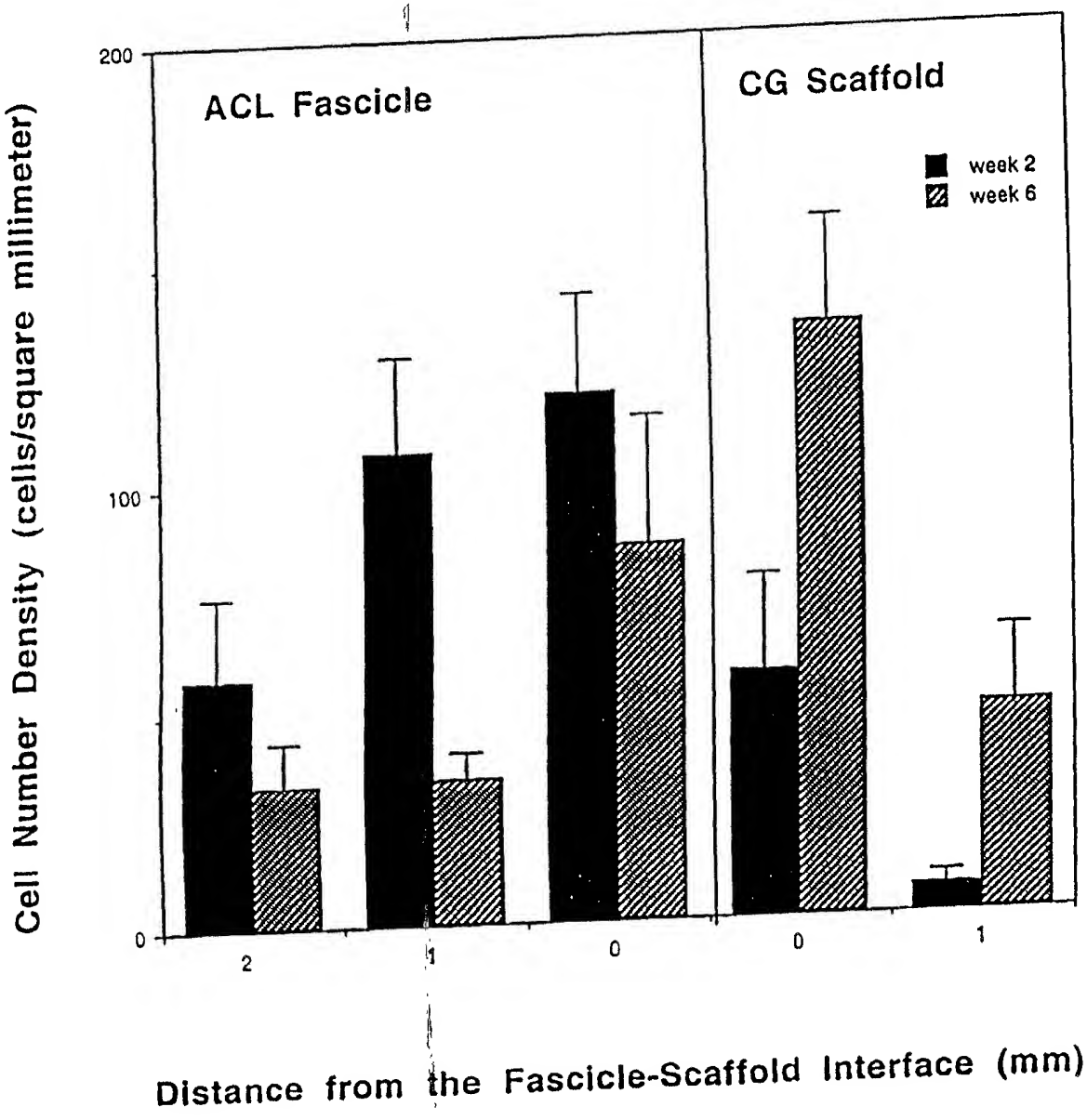
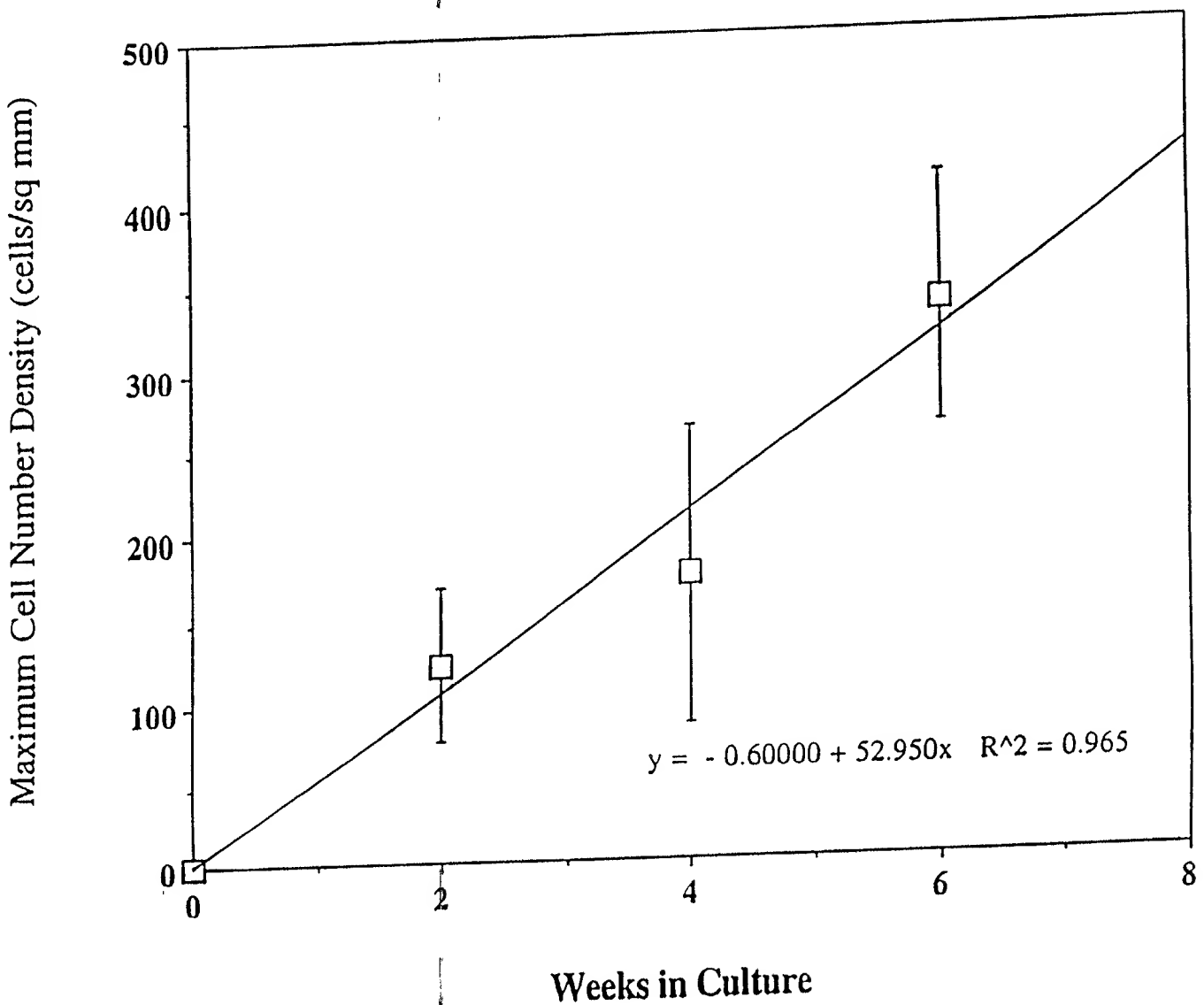


Figure 8: Maximum Cell Number Density in the Collagen-Glycosaminoglycan Scaffold as a Function of Weeks in Culture



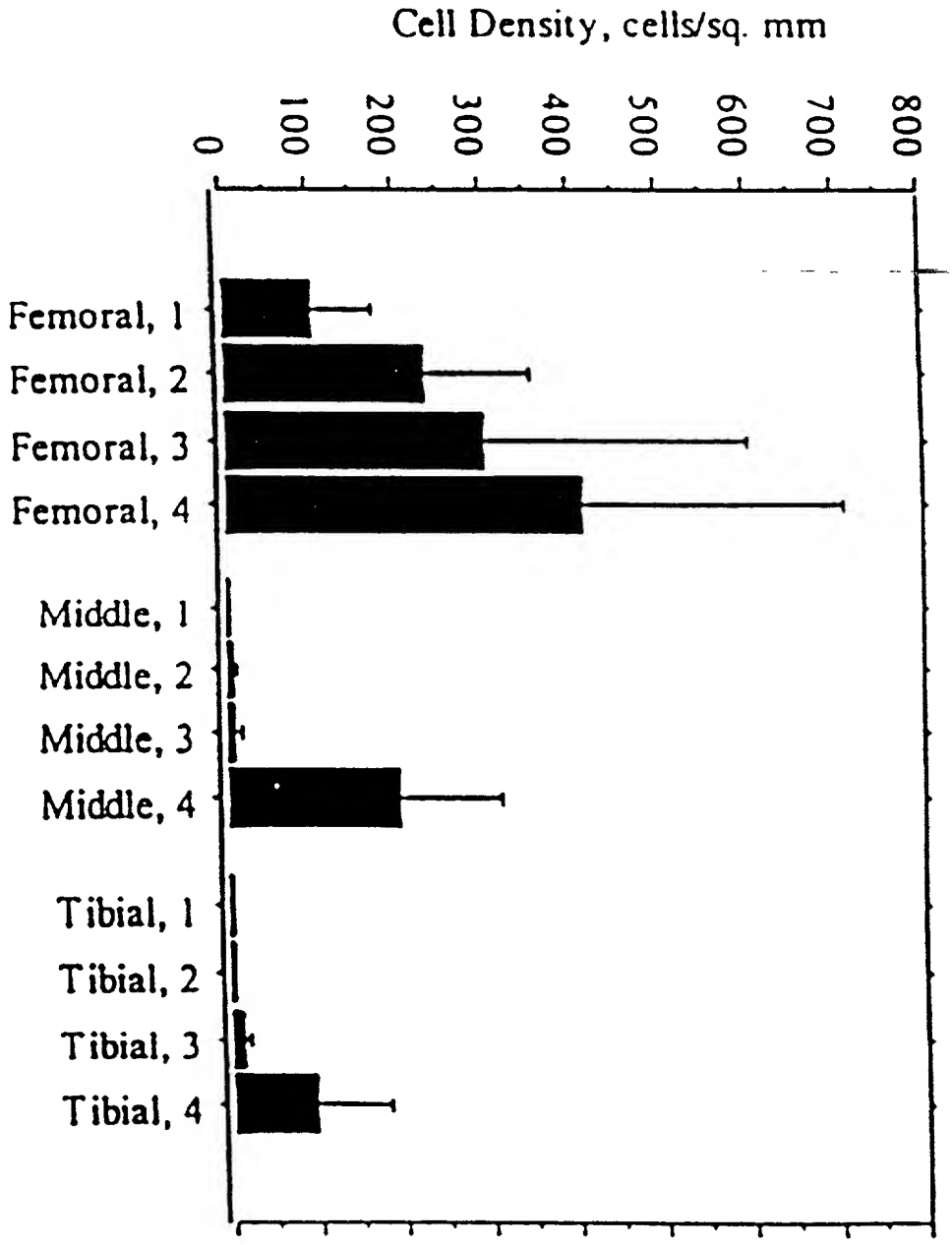

Cell Density, cells/sq. mm
0
100
200
300
400
500
600
700
800
Femoral, 1
Femoral, 2
Femoral, 3
Femoral, 4
Middle, 1
Middle, 2
Middle, 3
Middle, 4
Tibial, 1
Tibial, 2
Tibial, 3
Tibial, 4

FIG. 6

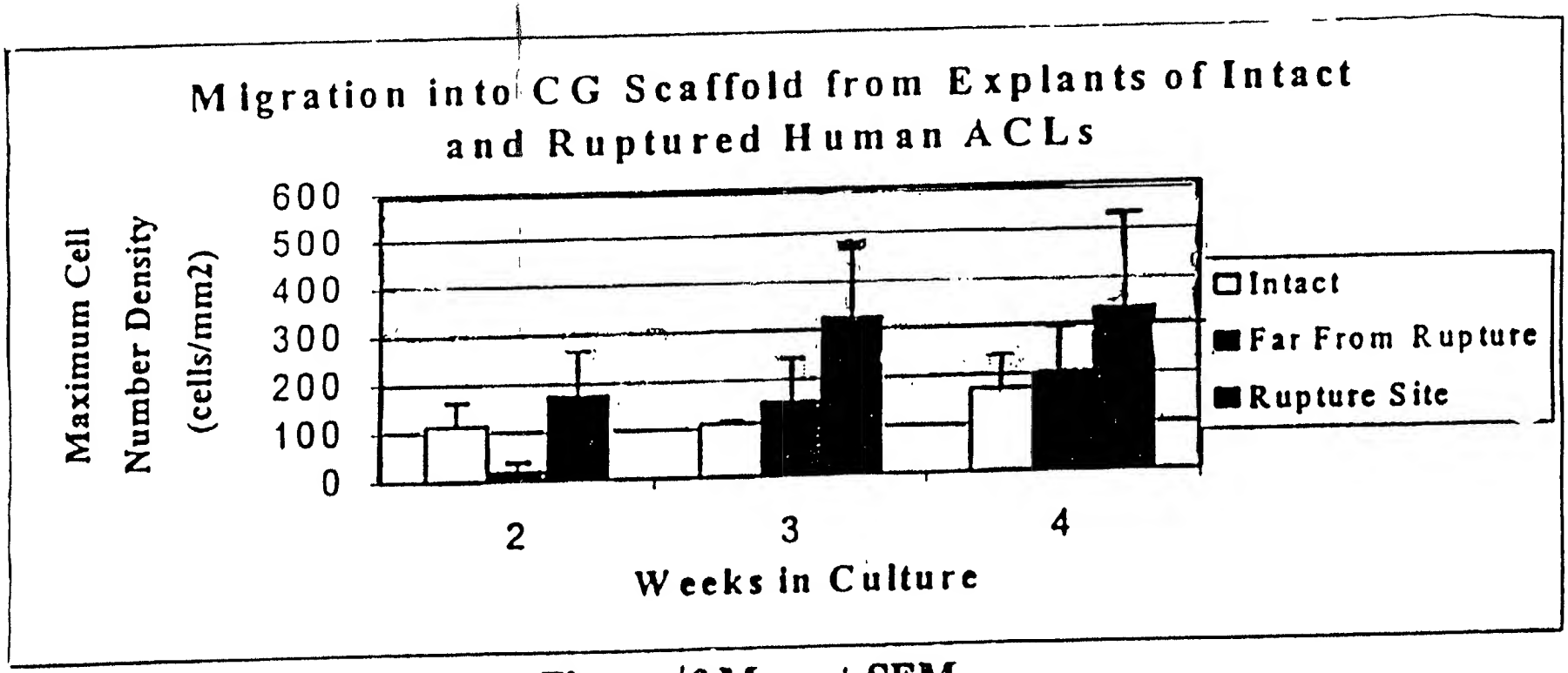


Figure *10* Mean ± SEM

Figure 11. Cell number density near the site of rupture in the human ACL as a function of time after injury

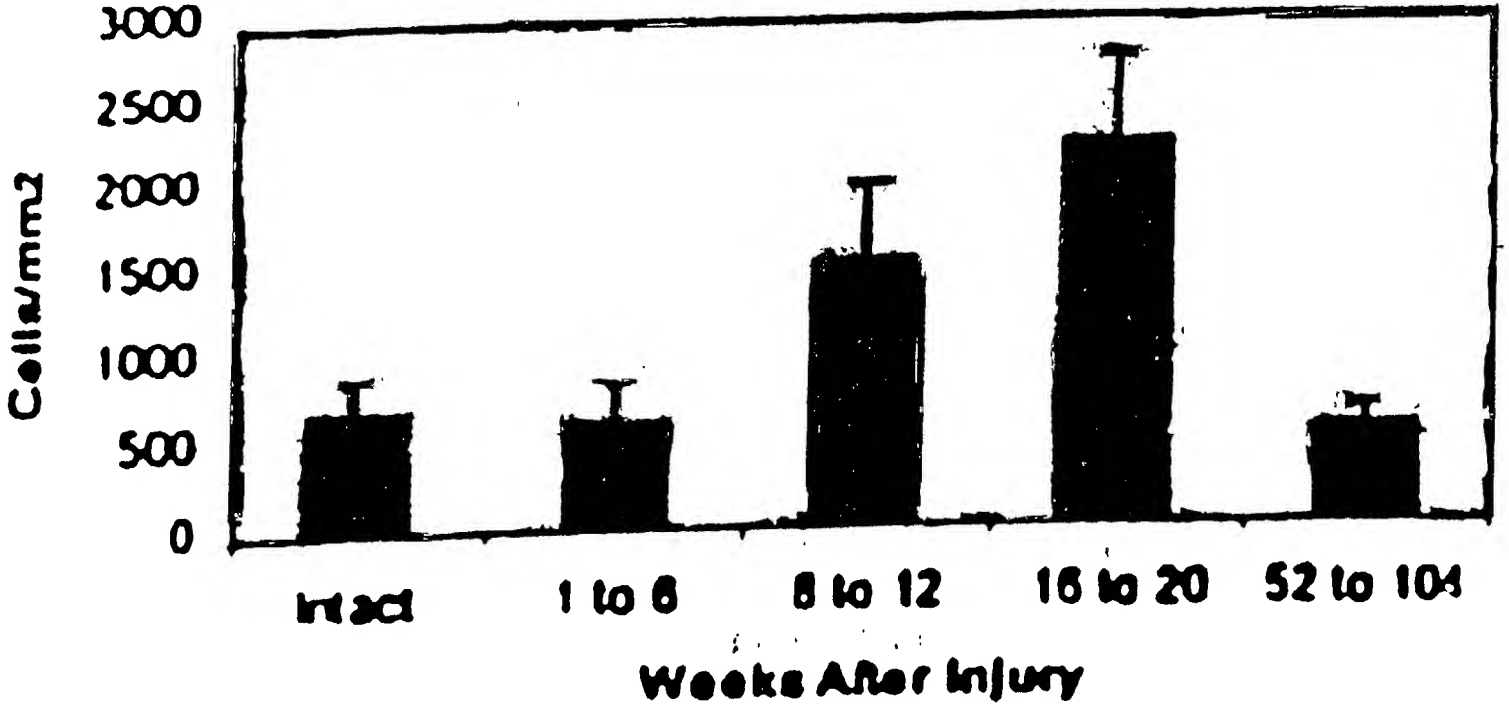


FIG. 11

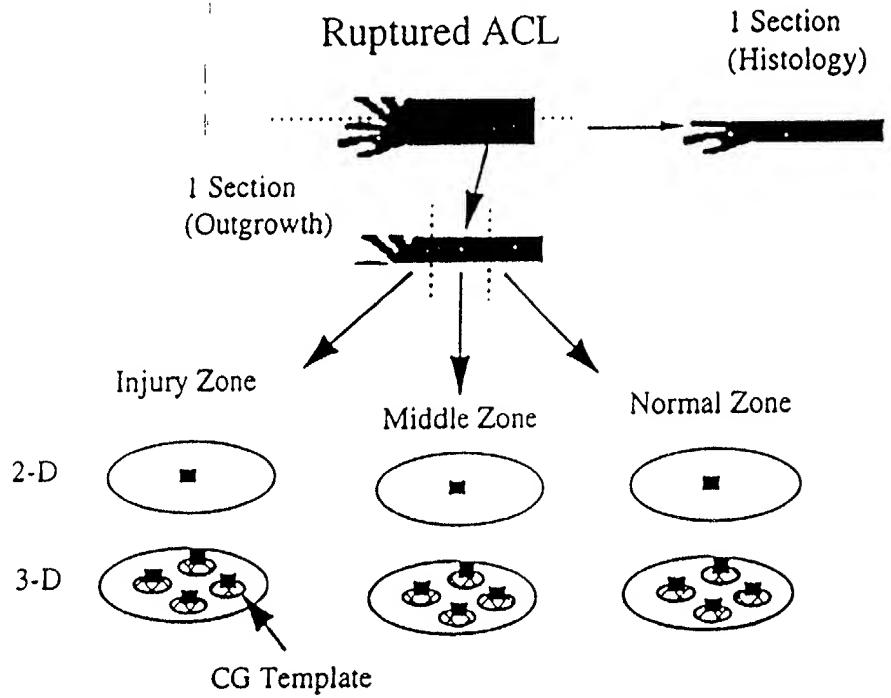

Ruptured ACL
1 Section
(Histology)
1 Section
(Outgrowth)
Injury Zone
Middle Zone
Normal Zone
2-D
3-D
CG Template

FIG. 12

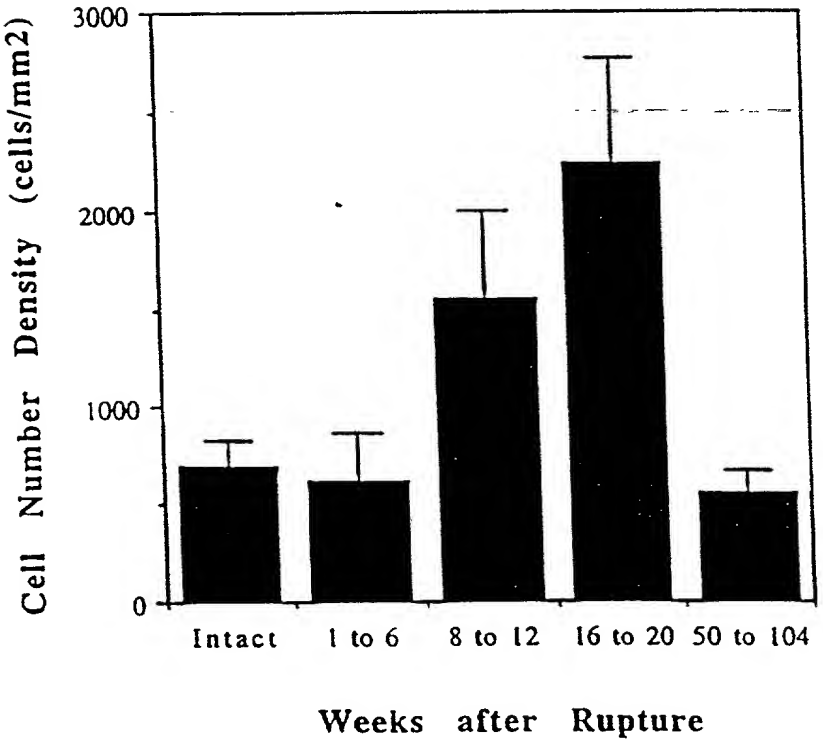

3000
2000
1000
0
Cell Number Density (cells/mm2)
Intact
1 to 6
8 to 12
16 to 20
50 to 104
Weeks after Rupture

FIG. 13

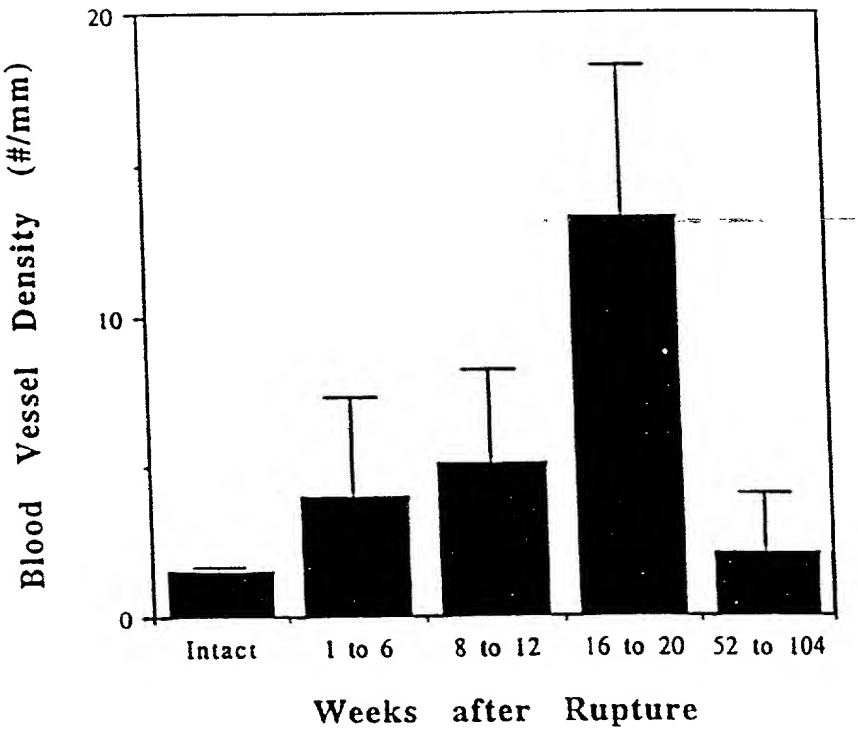
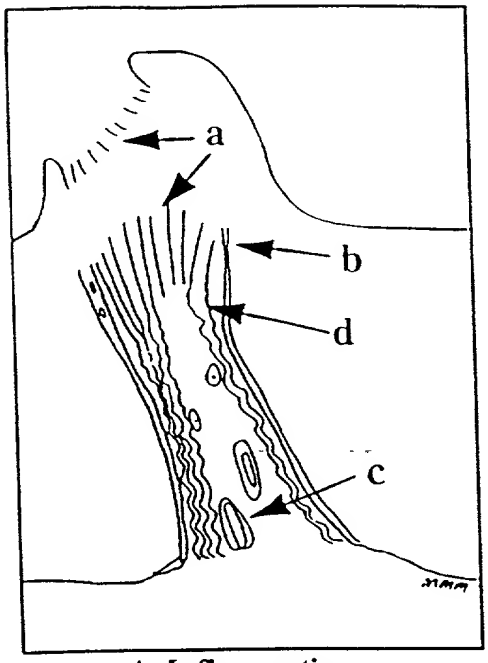
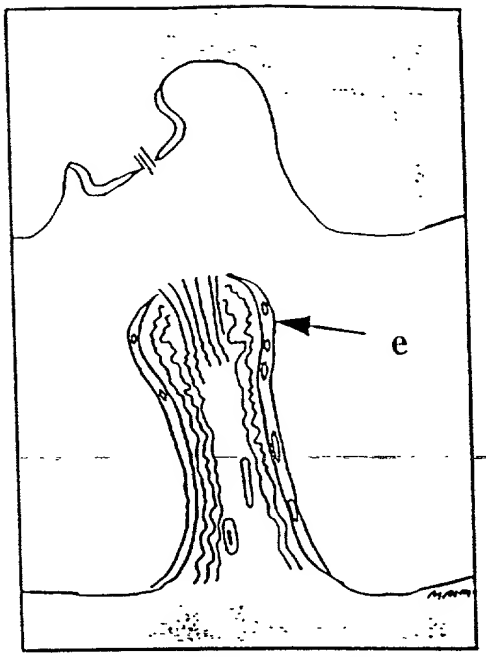

Blood Vessel Density (#/mm)
20
10
0
Intact
1 to 6
8 to 12
16 to 20
52 to 104
Weeks after Rupture

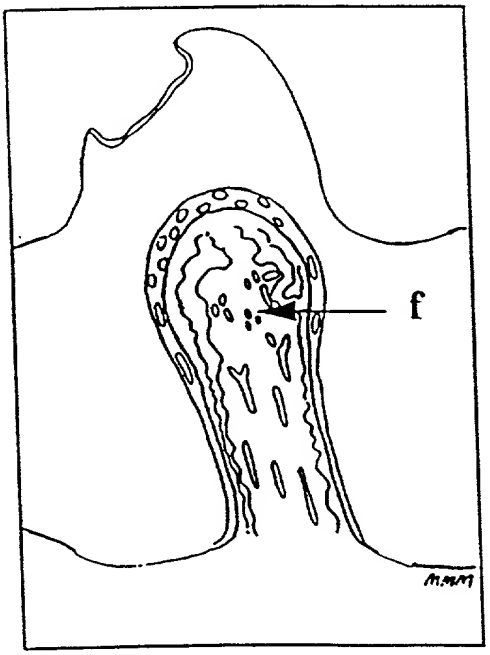
FIG. 14



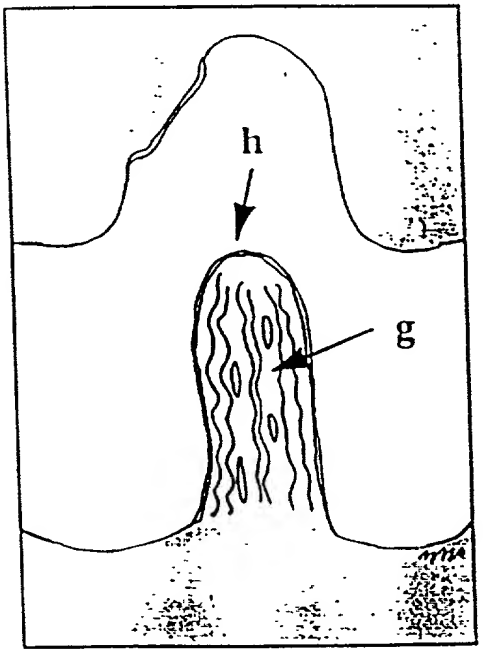
A. Inflammation



B. Epiligamentous Regeneration



C. Proliferation



D. Remodelling

FIG. 15

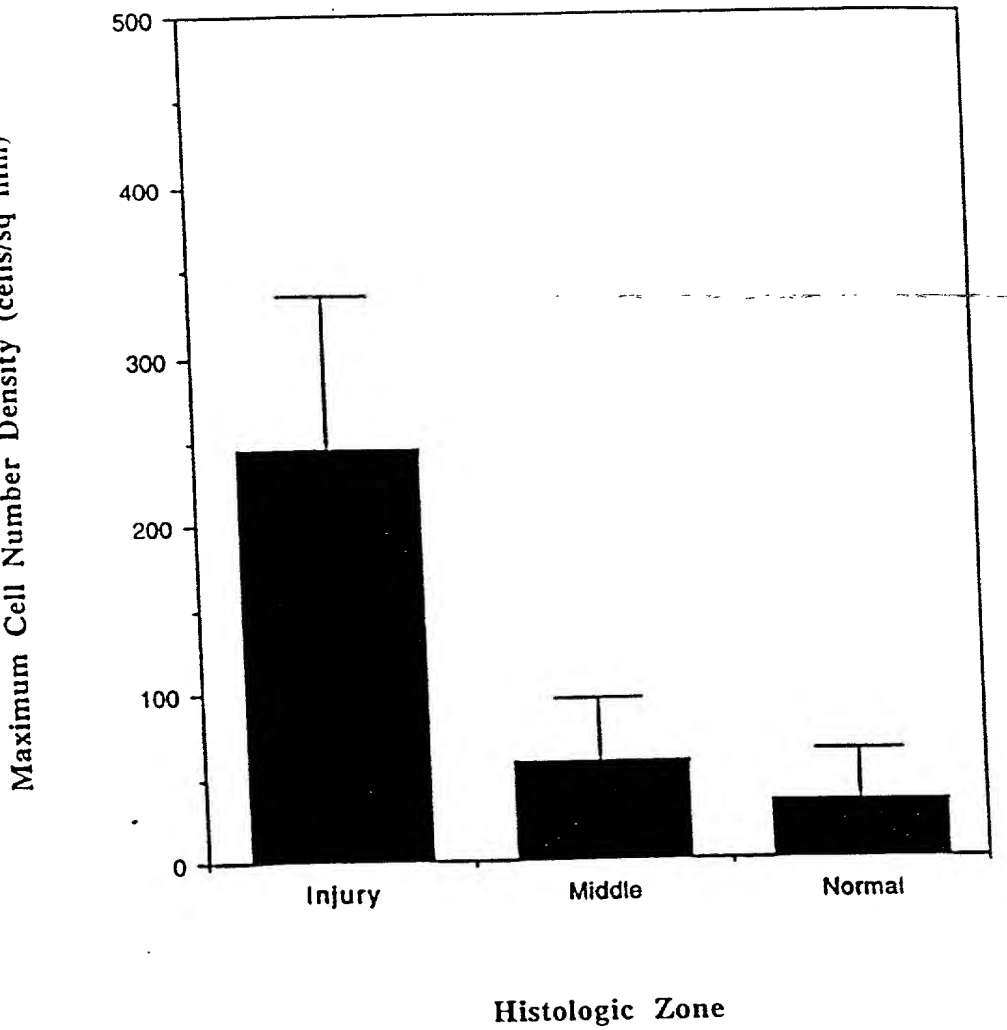

Maximum Cell Number Density (cells/sq mm)
500
400
300
200
100
0
Injury
Middle
Normal
Histologic Zone

FIG. 16

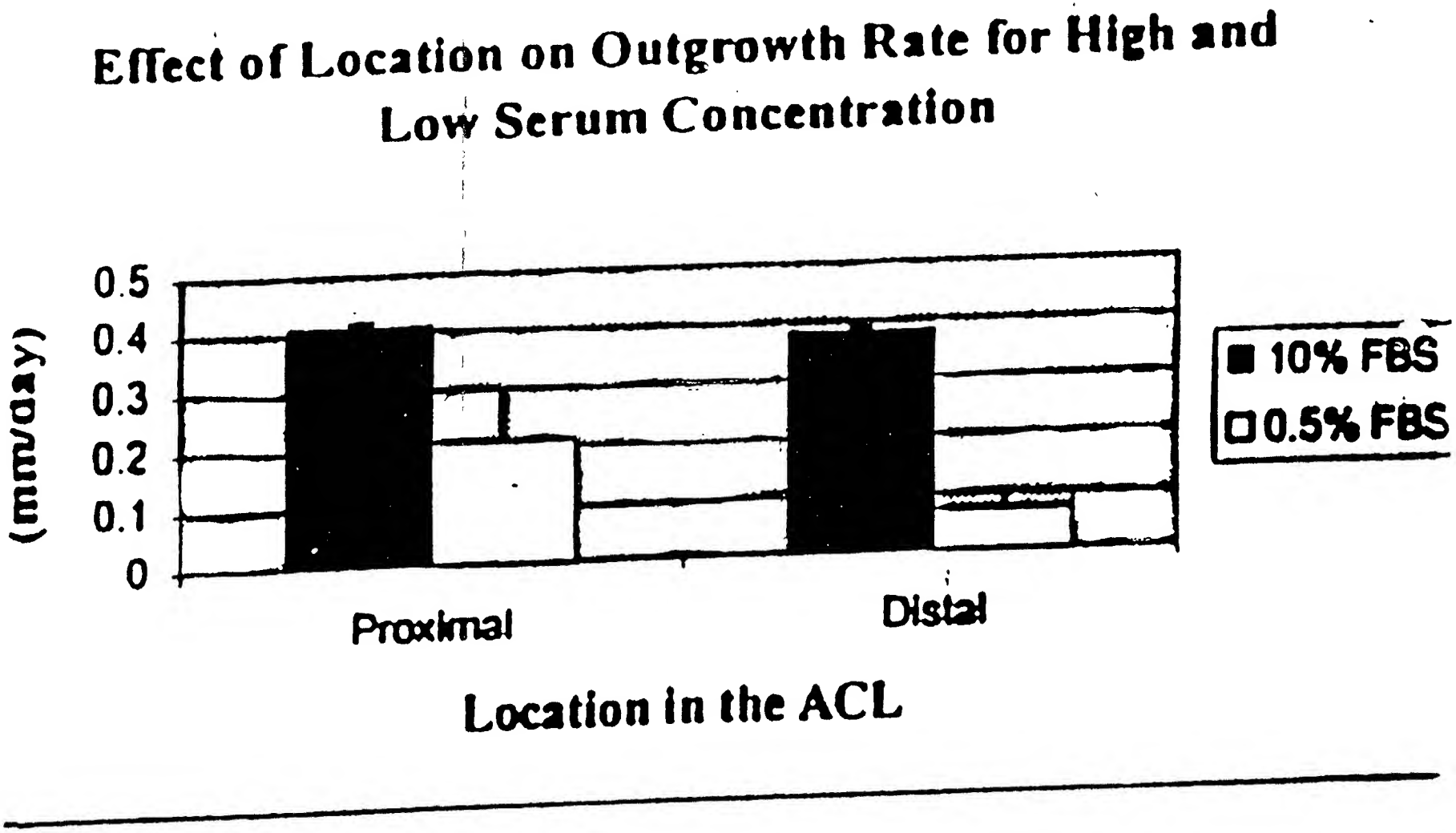


Figure 17 Mean±SEM

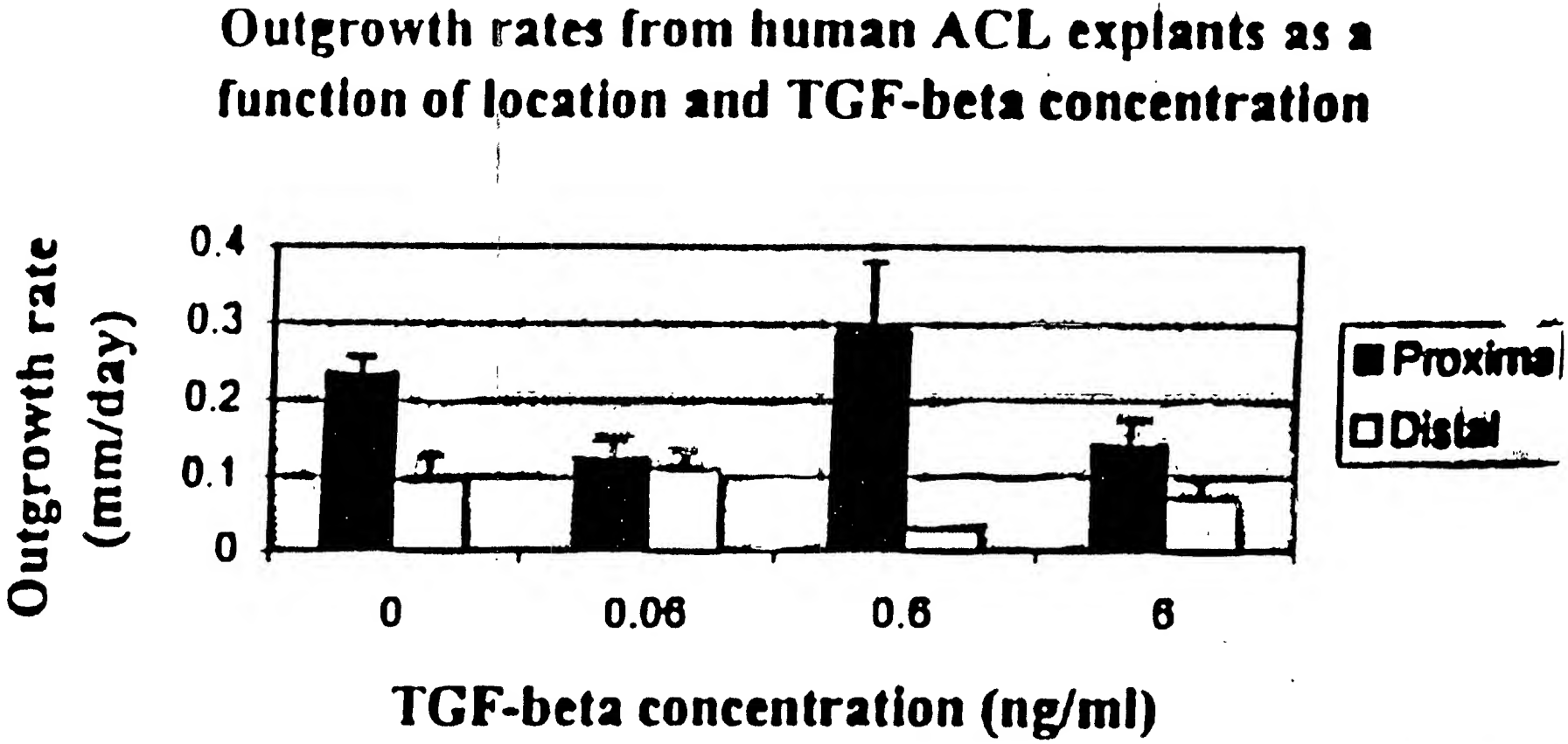


Figure 18 Mean±SEM

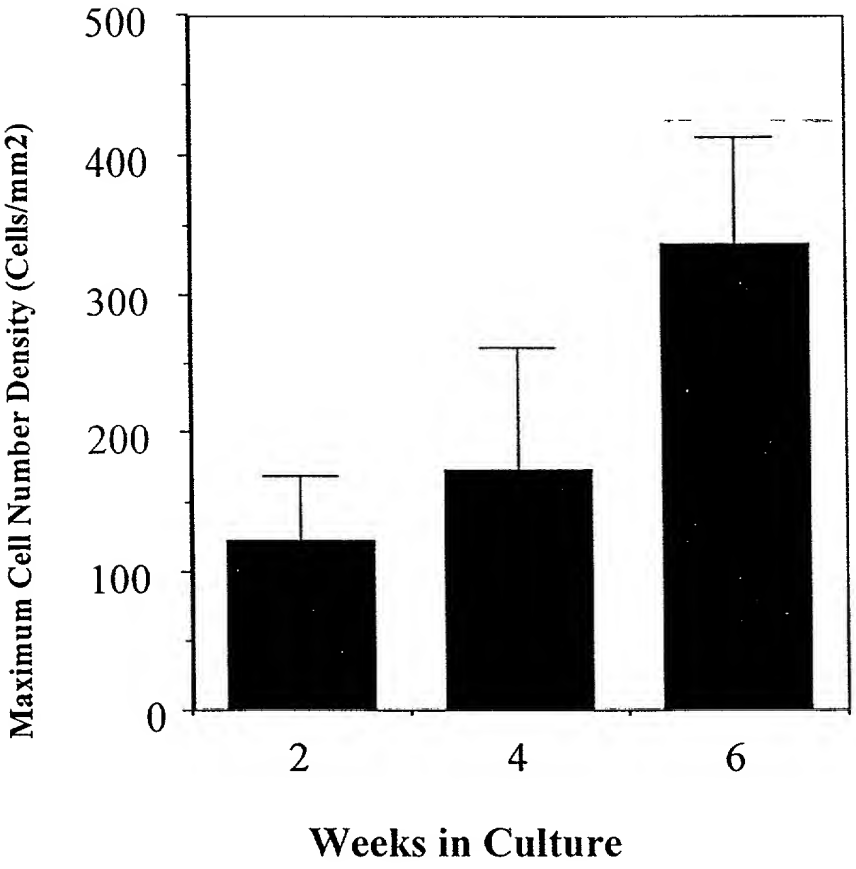
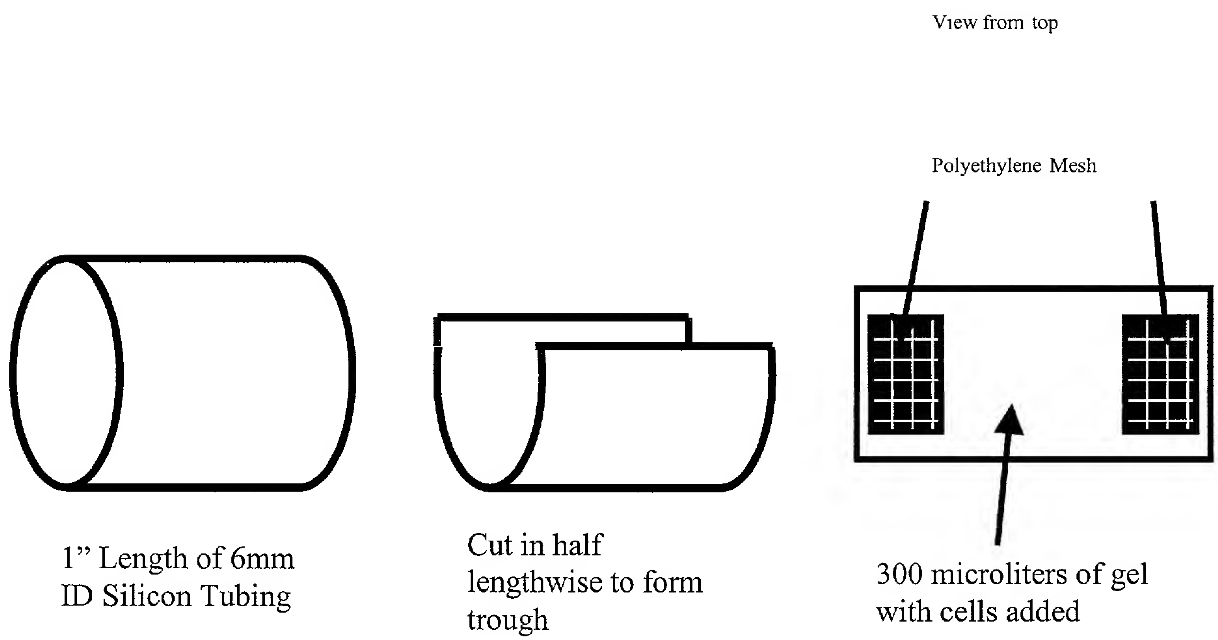
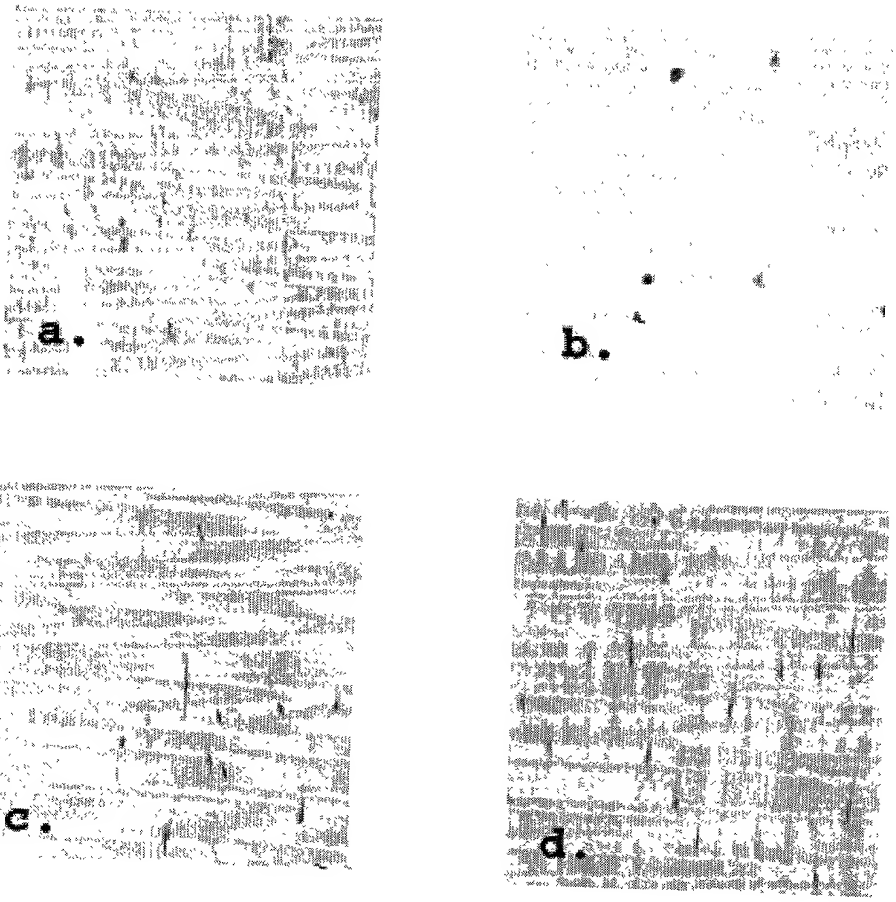

500
400
300
200
100
0
Maximum Cell Number Density (Cells/mm2)
2
4
6
Weeks in Culture

FIG. 19

Figure 20


View from top
Polyethylene Mesh
1" Length of 6mm ID Silicon Tubing
Cut in half lengthwise to form trough
300 microliters of gel with cells added

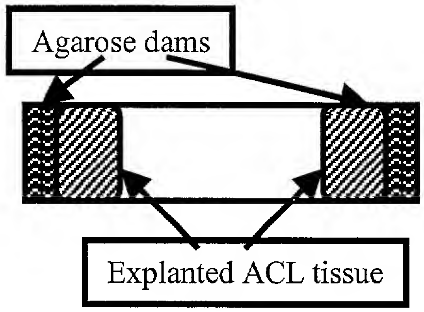


Experiment 11/00
a. Intact Human ACL
b. Gel with Cells at 3 hours of culture
c. Gel with Cells at 3 days of culture
d. Gel with Cells at 9 days of culture

Figure 21

FIG. 22

View from top



200 microliters of gel added

FIG. 23

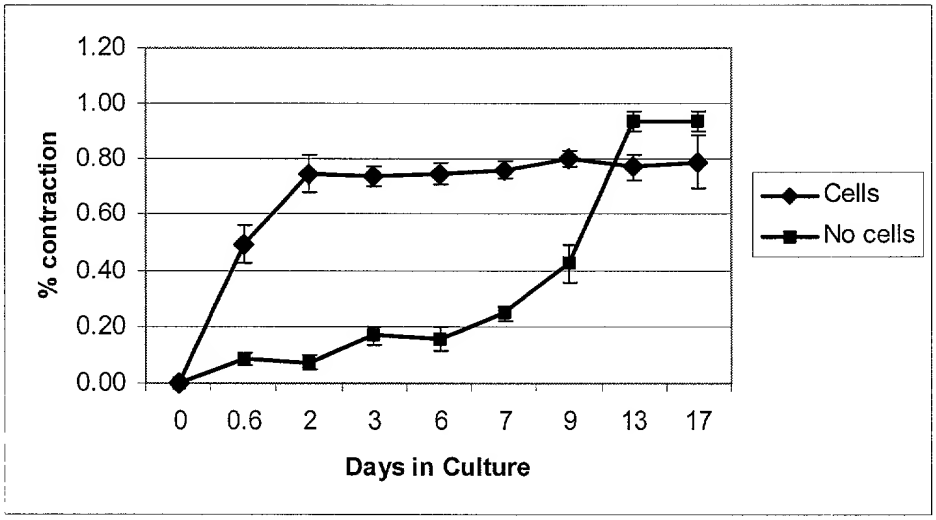
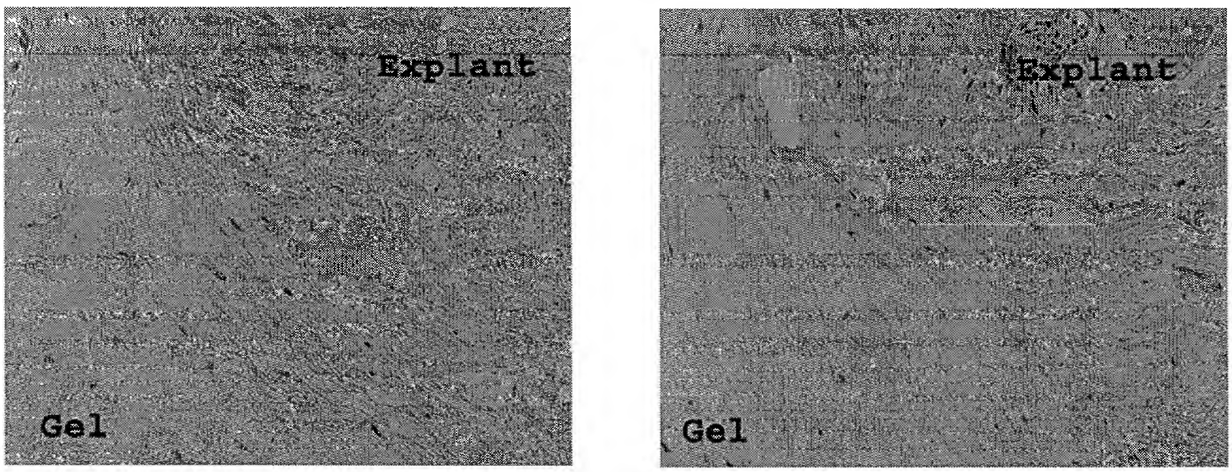

1.20
1.00
0.80
0.60
0.40
0.20
0.00
% contraction
0
0.6
2
3
6
7
9
13
17
Days in Culture
Cells
No cells

FIG. 24



Day 21: Cells

Day 21: Cell-free

FIG. 25

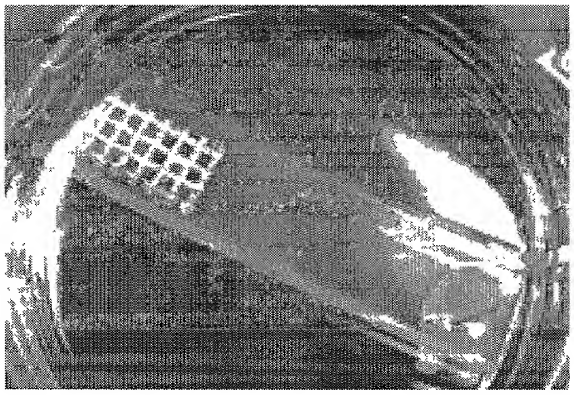
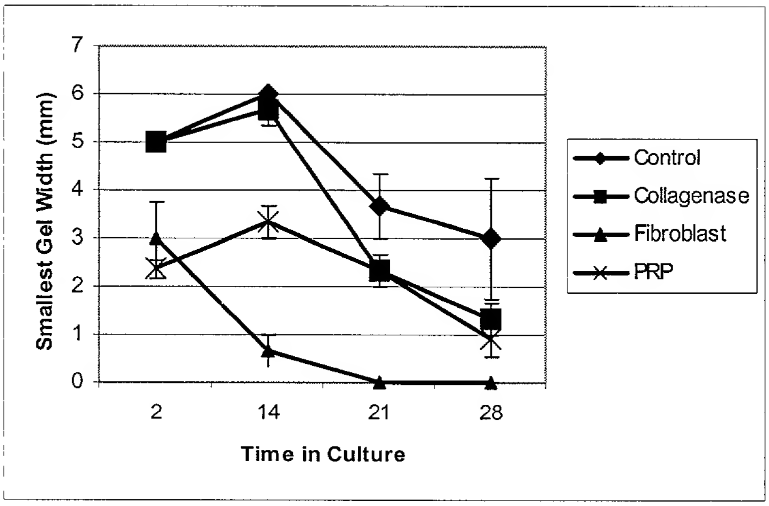


FIG. 26



TRA 1540310v1

FIG. 27

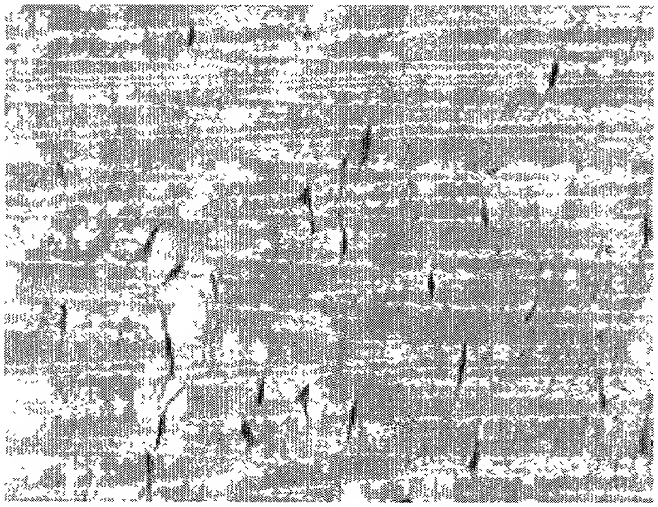


Fig. 28

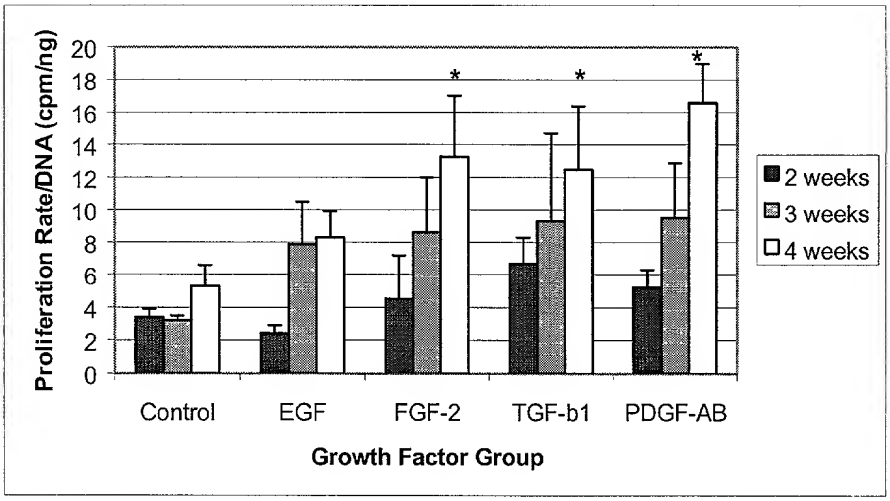
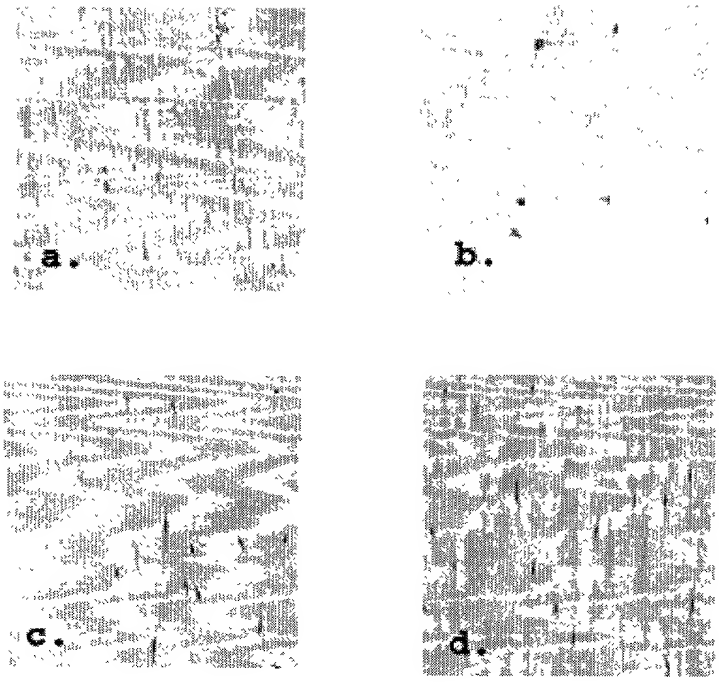

Proliferation Rate/DNA (cpm/ng)
20
18
16
14
12
10
8
6
4
2
0
*
*
*
Control
EGF
FGF-2
TGF-b1
PDGF-AB
Growth Factor Group
2 weeks
3 weeks
4 weeks

Fig. 29



Experiment 11/00
a. Intact Human ACL
b. Gel with Cells at 3 hours of culture
c. Gel with Cells at 3 days of culture
d. Gel with Cells at 9 days of culture

Fig. 30

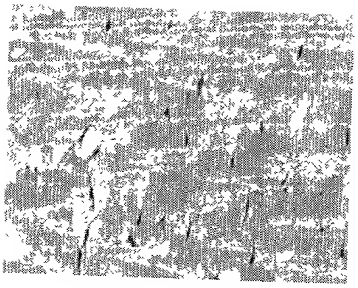
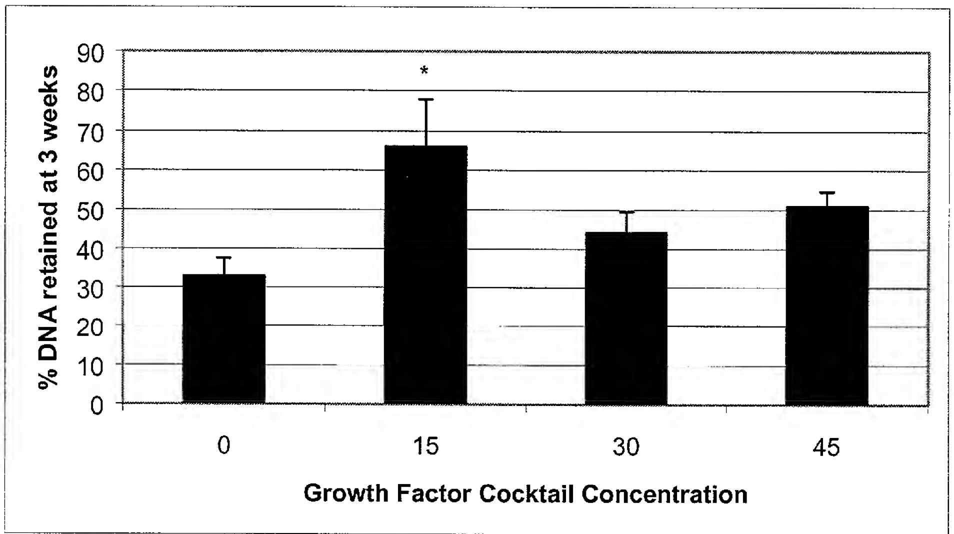


FIG. 31



TRA 1547910v1